



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,024	03/16/2004	Alexei A. Gridnev	CL2556USNA	2649

23906 7590 03/11/2005

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

CHOI, LING SIU

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,024

Applicant(s)

GRIDNEV ET AL.

Examiner

Ling-Siu Choi

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005 and 16 February 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
4a) Of the above claim(s) 20-23 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-17 and 24-33 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/17/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This Office action is in response to the Second Preliminary Amendment filed on February 22, 2005. Claims 18-19 were canceled and claims 31-33 have been added. Claims 1-17 and 20-33 are now pending.

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-17 and 24-33, drawn to a process to polymerize vinylically-unsaturated monomers, classified in class 526, subclass 103.
 - II. Claims 20-23, drawn to a product, classified in class 526, subclass 328.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a process using a free radical initiator..

4. Because these inventions are distinct for the reasons given above and have acquired a

Art Unit: 1713

separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Ms Gail Ann Dalickas on February 16, 2005, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-17 and 24-33. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-23 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

7. **The following is a quotation of the second paragraph of 35 U.S.C. 112:**

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 12-14 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1713

Claims 12-14, the recitations of "Class I monomers" or "Class II monomers" cause indefiniteness because the resulting claims do not clearly set forth the metes and bounds of the patent protection desired.

Claim 33 is a redundancy of claim 3.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

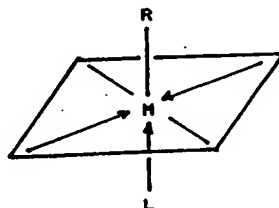
10. Claims 1-17 and 24-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Hawthorne (WO 87/03605).

A process to polymerize one or more vinylically-unsaturated monomers, comprising

contacting	the vinylically-unsaturated monomers,
	a chain transfer catalyst, and
	a hydrogen atom donor molecule
in the absence of conventional free radical initiators	
at a temperature from about room temperature to about 240°C	

(summary of claim 1)

Hawthorne discloses an oligomer obtained by the free radical polymerization of unsaturated monomers in the presence of a chain transfer agent comprising a transition metal complex of a metal cation and at least one chelating agent, wherein the transition metal complex is represented by the general structure of



wherein R is hydrogen or an organic group; L is a ligand for controlling the stability and electron transfer properties of the transition metal complex having cobalt and a bis(dimethyl glyoxime) ligand (abstract; page 3, lines 5-17; page 4, lines 15-17 and 29-31; page 5, lines 7-8) Hawthorne further disclose L can be water or an alcohol (page 5, lines 23-31). Attention is drawn to Example 1, wherein methyl methacrylate (MMA) in benzene is heated in the presence of a cobalt complex obtained by the contact of cobaltous acetate tetrahydrate, dimethylglyoxime, and pyridine in hydrogen to obtain oligo-MMA. It is noted that no conventional initiator such as AIBN used in Example 2 is used in oligomerization of the unsaturated monomers. Thus, the present claims are anticipated by the disclosure of Hawthorne.

11. Claims 1-15, 24-30, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Muir et al. (US 5,684,101).

Muir et al. disclose a process for solution polymerization of MMA in the presence of Co(II)(diphenanthrenequinone dioxime-diBF₂) as a catalytic chain transfer agent in methylethyl ketone(MEK) (Examples 1-3, C4). Thus, the present claims are anticipated by the disclosure of Muir et al.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

5

Ling-Sui Choi

LING-SUI CHOI
PRIMARY EXAMINER

March 4, 2005